D. The HDS quiz

HDS quiz Video link:

https://drive.google.com/file/d/0B90NHT-9pmVgN1hpcDBGMEUzYzQ/view?usp=sharing

Recorded Video Field Test/reenactment:

https://drive.google.com/open?id=0B90NHT-9pmVgeVkzb2hubUVwdEU

A field test that takes less than 5 minutes to set up and would instantly prove that it is physically not possible to get any legible information or copy answers in such a way.

Place: The field test video was recorded at the exact same classroom as the HDS quiz – Olson Hall

Testers: The three testers were M1, M2, and M3 students at the time of testing: 11/2015

M1 student (currently M3) – Kyle Bertea ,kbertea@neomed.edu

M2 student (currently M4) - Isabel Buehler ibuehler@neomed.edu

M3 (graduated) - Salman Khan skhan5@neomed.edu - randomly asked from the library nearby to participate.

Equipment: Dell Laptop with 15.6" screen

Set up:

- Kyle Bertea who took the exact same HDS quiz as Plaintiff. He also validated that
 the brightness of the screen and the screen mock-up are near identical to the HDS
 quiz.
- The brightness is fixed and set at the lower 1/3 of the brightness scale
- The proximity of the laptops and where the students sat are the same as in the video.
- One can use the black line of the desk and the metal leg of the desk as reference points.
- All three testers were reenacting what plaintiff was seeing doing in the video but in a
 more pronounced way to demonstrate that regardless how frequent to glance over, it
 is just physically not possible to get any legible information from the laptop at seat 30
 by glancing over.

Recorded Photo Field Test/reenactment:

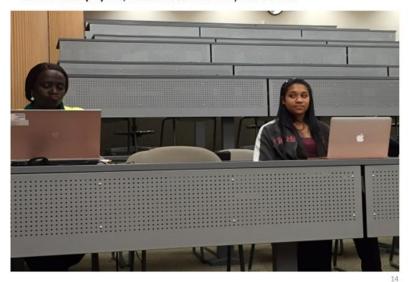
Reenactment - Seat 29 Olson Hall

Question: Can you see what's displayed on the screen of seat 30? Please take your time **Charlene Jackson (P1):** No, I couldn't see the computer screen.



Reenactment - Seat 29, Olson Hall

Question: Can you see what's displayed on the screen? Please take your time Lauren Mills (P1): No, I couldn't see the computer screen.



Reenactment - Olson Hall, Seat 29

Question: Can you see what's displayed on the screen? Please take your time Sohaib Awan (M1): No, I couldn't see what's on the computer screen



Charlene Jackson Cjackson Dreomed Clar Al
Lauren Mills Invilos Phoned edu An PI
Sonair Awan saumwaneomed.edu Salla Mi

I Cannot See the computer screens but, I can see the
Answer sheets. C. Jack
I couldn't su the computer ocreen, but could see the answer what An

I corldn't sue computer screen Sallan

I rorldn't sue computer screen Sallan

Test taker's Information	Irregular Behavior
Julian Endres Name @00038958 NEOMED ID#	☐ Unauthorized use of books, papers, calculators, PDA ☐ Failure to stop working when time is called at the end of the exam ☐ Bringing unauthorized electronic devices into the testing room ☐ Copying answers ☐ Other
Seat #	Details* Student appeared to be repeatedly looking at the computer of the student in Seat #30. This was recorded on tape and was observed by two proctors.
Name NEOMED ID# Seat #	☐ Unauthorized use of books, papers, calculators, PDA ☐ Failure to stop working when time is called at the end of the exam ☐ Bringing unauthorized electronic devices into the testing room ☐ Copying answers ☐ Other ☐ Details*:
Name NEOMED ID# Seat #	□ Unauthorized use of books, papers, calculators, PDA □ Failure to stop working when time is called at the end of the exam □ Bringing unauthorized electronic devices into the testing room □ Copying answers □ Other □ Details:*

Print | Close window

From : Mark A. Weiker <mark@awlawohio.com>

To : <afureyligan@neomed.edu>

Cc : <jcendrez@gmail.com>,<semerick@neomed.edu>

Subject: Fwd: CAPP Petition for Appeal - Julian Endrs

Date : Mon, 02 Nov 2015 12:42:25 -0500

Attachments : Petition For Executive Review - CAPP 2.doc, appeal statistics v1.docx, Capp Survey

no.pdf, Capp Survey no 2.pdf, Capp Survey yes.pdf, Julian - Psychiatric Review.docx

Ms. Furey-Ligan,

I am forwarding you a copy of Dr. Emerick's denial to Mr. Endres in regards to his submission of information for the ERC meeting this afternoon. Attached for reference is the information submitted by Mr. Endres, as well as a copy of a letter I delivered to you and Dr. Emerick this morning regarding the use of statistical information to support dismissal.

We are writing to record our objection to denying Mr. Endres' submission. First, Mr. Endres was not informed about the statistics used to dismiss him until after his CAPP hearing. Next, he was not provided with the requested class statistics until less than 24 hours before his appeal deadline. The requested data was delayed for days. There is no way Mr. Endres could have compiled and interpreted the class data in a meaningful way and submitted it before the appeal deadline. The school is well aware of this.

As indicated in my letter, when the CAPP invited statistics into its decision, it required them to analyze the information properly. The failure to do so is improper and constitutes an abuse of discretion by the CAPP and ERC. We again request that the information be considered today. In any case, please note our objections.

Mark A. Weiker Albeit Weiker, LLP 48 W. Whittier Street Columbus, Ohio 43206 Direct Dial: (614) 519-6918 www.awlawohio.com

Business & Employment Law / School Law / Criminal Defense / Civil Litigation

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======= Forwarded message =======

From : Julian Endres<jendres@neomed.edu>
To : "Mark A. Weiker" <mark@awlawohio.com>

Date: Mon, 02 Nov 2015 11:50:22 -0500

Subject : Fwd: CAPP Petition for Appeal - Julian Endrs ====== Forwarded message =========

Begin forwarded message:

From: Julian Endres < jendres@neomed.edu>



Capp Docs <cappdocs@gmail.com>

Fwd: Personal Statement for Second CAPP Meeting

2 messages

Julian Endres <jendres@neomed.edu>

Wed, Nov 18, 2015 at 9:18 PM

To: cappdocs@gmail.com

----- Forwarded message ------

From: Julian Endres <jendres@neomed.edu>

Date: Wed, Nov 18, 2015 at 11:12 AM

Subject: Personal Statement for Second CAPP Meeting

To: Mary Beth Seith <mseith@neomed.edu>

Hi Mary Beth,

Here is my personal statement for my second CAPP meeting. Would you please include it into my student file and make copies for the committee members who will be there.

Sincerely, Julian Endres



CAPP second hearing opening statement with statistics.pptx

Julian Endres < jendres@neomed.edu>

Wed, Nov 18, 2015 at 9:18 PM

To: cappdocs@gmail.com

----- Forwarded message -----

From: Mary Beth Seith <mseith@neomed.edu>

Date: Wed, Nov 18, 2015 at 12:08 PM

Subject: RE: Personal Statement for Second CAPP Meeting

To: Julian Endres <jendres@my.neomed.edu>

Hi Julian,

As previously communicated, we are not permitted to accept additional materials into your student file after Executive Review. You are certainly welcome to use this document as your personal aid while making your opening statement, but the committee will not be receiving copies.

-Mary Beth

Mary Beth Seith

Registrar

Office of Enrollment Services

Case: 5:17-cv-02408-SL Doc #: 26-1 Filed: 03/09/18 8 of 33. PageID #: 833

Defendant Emerick withheld the evidence that the CAPP 's decision was based upon for the First Hearing

Test had 25 questions, 6 were answered identical and wrongly by both students

									probability of same
question	Α	В	C	D	E	total	yellow-2	n-2	answer
1	<u>52</u>	47	13	16	31	159	14	157	0.089
2	29	<u>35</u>	4	8	84	160	27	158	0.17
6	14	41	23	13	69	160	39	158	0.25
13	6	15	119	20	0	160	6	158	0.038
22	11	22	6	53	68	160	51	158	0.32
23	125	<u>16</u>	12	7	0	160	123	158	0.78

underline-correct answer yellow-marked by both students Probability for all 6 to be identical and wrong is the product of these 0.000036

Test had 25 multiple choice questions

15 were answered correct by the students

6 were answered wrong and identical by the two students

4 were ansered wrong and different by the two students

This analysis assumes that correct answers were arrived at independently

Case: 5:17-cv-02408-SL Doc #: 26-1 Filed: 03/09/18 10 of 33. PageID #: 835

The misinformation Defendant provided to the CAPP that the Final decision was based upon

Case: 5:17-cv-02408-SL Doc #: 26-1 Filed: 03/09/18 11 of 33. PageID #: 836



DATE: November 2, 2015

TO: Dr. Elisabeth Young, CAPP Executive Review Chair

FROM: Dr. Sandra Emerick, Chief Student Affairs Officer

RE: Appeal for Julian Endres (M1)

I was asked by Dr. Elisabeth Young, Chair of CAPP Executive Review to query the health care providers from whom information was sent regarding Julian Endres to determine nature, location, date, and length of the interaction/exam in order to clarify their information provided to NEOMED.

Summary of Phone Conference with Dr. Trauben, Friday, October 30 at 1pm by Sandra Emerick, Chief Student Affairs Officer

I spoke via phone with Dr. Trauben regarding his letter addressed to me regarding Julian Endres.

Dr. Trauben is a practicing Psychiatrist in New York City and is a graduate of NEOMED Class of 1990.

He was visiting his mother in Akron (on vacation) when he was asked by a friend of a friend to see Julian Endres who was having difficulty getting an appointment with a psychiatrist related to his CAPP Phase 2 case. Dr. Trauben met face to face with Julian Endres on Tuesday, October 27th and conducted a full 90 minute psych interview. This was the first time Dr. Trauben met Julian. He understood that he needed a quick turn around on documentation in order to submit a CAPP appeal letter. Dr. Trauben also observed the video of Julian during the test in question.

He stated to me "frankly, I could see how it looks like" cheating. But he believes that the ADHD could equally explain if he was distracted by flashing lights. He explained the nature of children who play video games and learn responses to flashing lights. Perhaps that is why his attention was drawn to his right for that reason.

He believes this might inject enough doubt if it could be from ADHD, however the physician believed we were acting under the "beyond a reasonable doubt" level of evidence. I explained that our level of evidence in these types of hearing is "a preponderance of evidence."

He thinks that a change of medicine should be taken into account. Stratera is not as strong as Ritalin. Perhaps Julian was unaware of his HD behaviors (fidgeting).

* * *

Summary of Phone Conference with Dr. Caroline Ramos, Thursday, October 29 at 5:20 pm by Sandra Emerick, Chief Student Affairs Officer

Dr. Ramos was a BSMD student from UA and transferred to OSU for medical school. She is an internist in Columbus, Ohio. Dr. Ramos was asked by Julian Endres' mother, a patient of Dr. Ramos, to see Julian and assist him. She never conducted a mini or complete psychological exam.

Case: 5:17-cv-02408-SL Doc #: 26-1 Filed: 03/09/18 12 of 33. PageID #: 837

Dr. Ramos only met with Julian three times in total. She did not meet with him or speak with him before writing the letter submitted to CAPP Phase 2. She simply prepared the letter based upon the materials Julian's parents sent her via jump drive regarding Julian's CAPP case. She was asked to view the video and to offer a letter for CAPP Phase 2.

She last met with Julian on August 27th and provided a prescription for Stratera. She strongly encouraged him to locate a physician closer to school to see in tandem with taking this medication. She did not advise him to switch medications or to go off Stratera. She mentioned that she could see how the constant viewing of the peer's computer to his right might be viewed as cheating. She was surprised that he never registered his ADHD as a disability to seek accommodations.

Declaration of Andrew A. Trauben, M.D.

I, Dr. Andrew A. Trauben, hereby declare as follows:

- I am an adult, adolescent and child psychiatrist. I obtained my medical degree from Northeast Ohio College of Medicine. I have been in private practice for the past 19 years.
- 2. On October 27, 2015, I saw Julian Endres for a psychiatric evaluation. I gave him a full psychiatric interview. For 90 minutes I asked him in detail about his psychiatric history, including the factors identified in the DSM-5 as symptoms of attention deficit hyperactivity disorder (ADHD). I concluded that Mr. Endres has multiple hyperactive and inattention symptoms.
- In addition to evaluating Mr. Endres, I have also watched a video of Mr.
 Endres taking a test on which he has been accused of cheating.
- 4. On October 27, 2015, after interviewing Mr. Endres and watching the video, I wrote a letter to Dr. Sandra Emerick, the Chief Student Affairs Officer at Northeast Ohio Medical University. I explained in that letter that after interviewing Mr. Endres, and watching the video, I concluded that involuntary aspects of Mr. Endres's ADIID could explain those movements of his in the video that had been construed as deliberate efforts to cheat.
- 5. Sometime after that drafting that letter, but before November 2, 2015, I received a call from Dr. Emerick about the contents of my October 27 letter. During that call, I told Dr. Emerick, among other things, that I believed Mr. Endres's behavior in the test video could be explained equally by his ADHD as by a deliberate effort to cheat.

- 6. Recently, I have been shown a memo drafted by Dr. Emerick, dated

 November 2, 2015, which purports to summarize the contents of that call. That memo

 misrepresents the contents of our call in several respects.
- 7. The memo states, in its first substantive paragraph, "He understood that he needed a quick turn around on documentation in order to submit a CAPP appeal letter."

 That sentence appears to suggest that my analysis of Mr. Endres, or the opinion I rendered, was compromised because of the timeframe in which it was completed. That is not so, and it is not something I ever conveyed to Dr. Emerick.
- 8. The memo then states, correctly, that I explained that "the ADIID could explain" Mr. Endres's behavior in the video as well as an accusation that he deliberately cheated. But it then states, "[Dr. Trauben] believed we were acting under the 'beyond a reasonable doubt level of evidence.' I explained that our level of evidence in these types of hearing is 'a preponderance of evidence." That sentence suggests that my opinion that Mr. Endres's behavior could be explained as well by his ADHD as by an attempt to cheat somehow depended on the evidentiary standard being used in the disciplinary proceeding. That is not the case, and that is not something I ever said to Dr. Emerick. I never suggested that my opinion would be different under a "preponderance of evidence" standard. As I stated to Dr. Emerick, I believe Mr. Endres's behavior can be explained as well by his ADHD as by a deliberate attempt to cheat. That is true no matter what evidentiary standard might be used.
- 9. The memo concludes by stating that I suggested, "Perhaps [Mr. Endres] was unaware of his HD behaviors (fidgeting)." That sentence suggests that fidgeting was the only behavior of Mr. Endres's that I thought he may have been unaware of due to his

ADFID. That is not something I conveyed to Dr. Emerick. It was, and is, my opinion that Mr. Endres, due to his ADFID, may have been unaware of the full range of behavior exhibited in the test video.

- 10. In my opinion, Dr. Emerick's November 2 memo does not faithfully memorialize the contents of our telephone call.
- 11. I was asked to be available by phone to tesetify during Mr. Endres's second hearing, which occurred on November 18, 2015. I was told that that hearing would start at 2:00 p.m. I was not called to testify until approximately 2:55 p.m.

I hereby affirm that the foregoing is based on my personal knowledge and is true to the best of my knowledge.

DATED: 8/4/16 BY: Andrew A. Trauben, M.D.

Declaration of Caroline Ramos, M.D.

- I, Dr. Caroline Ramos, hereby declare as follows:
- 1. I am a primary care physician at Columbus Internal Medicine.
- 2. For approximately 20 years I have served as the primary care physician for Jami Cheng and John Endres.
- 3. On April 13, 2015, I also began caring for their son, Julian Endres ("Mr. Endres"). I was specifically asked by his parents at that time to care for his attention deficit hyperactivity disorder (ADHD) and his weight loss. I spent an hour with Mr. Endres that day and conducted a thorough interview of him.
 - 4. Between April 13 and August 27, 2015, I met with Mr. Endres three times.
- 5. Mr. Endres and his parents informed me that he had taken Ritalian to treat his ADHD from a young age. Ritalin is a stimulant.
- 6. During the summer of 2015, Mr. Endres stopped taking Ritalin. His appetite returned and his weight improved.
 - On August 5, Mr. Endres presented to me to discuss alternatives to Ritalin.
- 8. That day, I prescribed him Strattera, a non-stimulant medication used to treat ADHD.
- 9. Mr. Endres reported to me for a follow-up on August 27. He reported that since starting on Strattera he was feeling better, maintaining his weight, and was able to focus. He reported no side effects.
- 10. On October 12, I was contacted by Mr. Endres's parents and informed that he had been accused of academic misconduct at his medical school.

which contained the video.

- 12. I viewed the video that day and noticed several behaviors by Mr. Endres, including fidgeting, yawning, and the need to shift positions, which could have been caused by his ADHD.
- 13. In order to provide an objective assessment of Mr. Endres's actions in the video, I did not speak with him between the time I learned of the accusations against him and the time I viewed the video.
- 14. On October 13, I submitted a letter on Mr. Endres's behalf to Dr. Sandra Emerick, the Chief Student Affairs Officer at Northeast Ohio Medical University, explaining my history of care for Mr. Endres and my observations after watching the video of Mr. Endres taking the test in question.
- 15. On October 29, around 5:30 p.m., I received a call from Dr. Emerick about the letter I had submitted.
- Dr. Elisabeth Young, who is identified in the memo as the "CAPP Executive Review Chair." The memo is dated November 2, 2015.
- 17. The memo purports to summarize the contents of my telephone conversation with Dr. Emerick, but it misrepresents the contents of our call in several ways.
 - 18. The memo contains the following passage:

Dr. Ramos only met with Julian three times in total. She did not meet with him or speak with him before writing the

letter submitted to CAPP phase 2. She simply prepared the letter based upon the materials Julian's parents sent her via jump drive regarding Julian's CAPP case.

That passage appears to attack the basis on which I rendered the opinions in my October 13 letter. The passage contains several false or misleading representations.

- 9. The passage states that I "only" met with Mr. Endres three times. Those meetings, however, occurred in a span of just over four months. Three meetings in a four-month span exceeds the rate at which I meet with most of my patients.
- 20. The passage then states that I did not meet with Mr. Endres prior to submitting my October 13 letter. But as noted above, I met with Mr. Endres three times in 2015, the most recent occurring on August 27, just one month before the incident at issue. My statement that I did not meet with Mr. Endres prior to writing the letter was not a caveat intended to qualify the opinion I was rendering; its import was to convey that I had chosen to view the video before speaking to Mr. Endres so that my view of the video would not be tainted by his explanation of his actions.
- 21. The final sentence of the passage concludes by stating that I "simply prepared the letter based upon the materials Julian's parents sent [mc] via jump drive." That is false, and it is not something I ever conveyed to Dr. Emerick. I prepared the letter based upon (1) my professional care for Mr. Endres, which spanned a time when he was using Ritalin, then using an ADHD medication at all, and finally when he was using Stratteral and (2) what I observed when I watched the video. This final sentence of the passage suggests that the views I expressed in my letter were somehow biased by information I received from Mr. Endres's parents. That, too, is false.

- 22. The November 2 memo later states that I "mentioned that [I] could see how the constant viewing of the peer's computer to his right might be viewed as cheating." It takes that statement of mine out of context. What I told Dr. Emerick is that, while the video might appear to be evidence of cheating, it is also consistent with the behavior of someone with ADHD.
- 23. In my opinion, Dr. Emerick's November 2 memo does not faithfully memorialize the contents of our telephone call.

I hereby affirm that the foregoing is based on my personal knowledge and is true to the best of my knowledge.

DATED:

5/2016

BY

Caroline Ramos, M.D.

Defendant Emerick

Blocked off Evidence that wasn't allowed in the student file

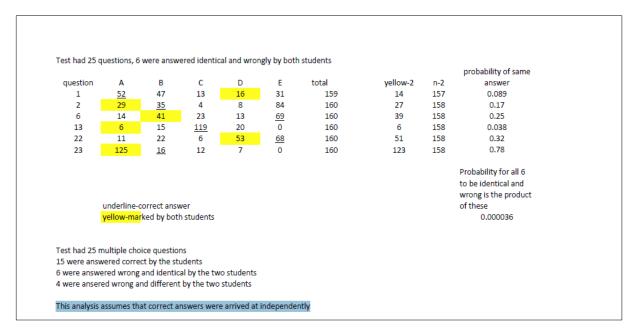
filename: "Endres - ERC Appeal Substantial Evidence.docx" 141, 142, 152, 158

As you may be aware, I was recently provided with data from the entire class for the course in question. This includes answers from all students on the quiz. This data was provided to me after my CAPP committee meeting. I also recently learned about statistics provided to the CAPP Committee by Dr. Thewissen. I believe this constitutes new, relevant, and substantial evidence that should be considered by the Committee.

The statistics below were provided by Dr. Thewissen to the CAPP Committee. They indicate that the "probability for all 6 questions to be identical and wrong is the product of these: 0.000036". (Note: the probability should be 0.000048. I tried to validate this with Dr. Thewissen before the Executive CAPP Committee's hearing, but Dr. Thewissen was not available.)

The 0.000048 probability was a single comparison between myself (seat 29) and the other student (seat 30). Based on the one sample, it could be easily interpreted that it is 99.999952% not possible to have 6 identical wrong unless I was cheating. The comparison could be made to a 99.999952% DNA match, thus leaving absolutely no room for any doubts. Under this type of scrutiny, it felt like everything I provided to the CAPP Committee was believed by the Committee to be excuses and dishonesty.

The new substantial evidence provided below demonstrates that, when more comparisons are done, the 0.000048 figure is in the mid-range of probabilities presented in this document.



Dr. Thewissen Statistics

	Score	Total correct	Total wrong
Seat 29 (Endres)	72	18	7
Seat 30	64	16	9

Endres/seat 29 Probability: 0.1 x 0.18 x 0.26 x 0.04 x 0.33 x 0.78 = **0.000048**

I took Dr. Thewissen's lead in choosing the statistical approach and broadened his original analysis. All probability cases shown in this document are based on the following conditions:

- Statistical model the same statistical model that was used by Dr. Thewissen
- Sample pool the entire HDS class quiz performance report I received on October 27, 2015.
- Samples include the students who have 5, 6, 7, 8, 9, 10, and 11 identical wrongs. (This does not include every possible case, only the ones I could identify by hand in the time I was given).

Substantial Evidence:

• The 84% Similarity (table 1 - table 2):

The 84% similarity with 6 identical wrong answers was seen as improbable, and was used as the basis to confirm that I was cheating. By extending the data set from two students to the entire HDS class we can see that it is not improbable. Table 1 shows 40+ cases that have a similarity greater than or equal to 76% with 6 or more identical wrong answers. Table 2 has close to a hundred cases with similarity greater than 80%.

• The 6 identical wrong answers I have with seat 30 (table 3):

When the sample pool is extended from one student to six students, it shows that for each identical wrong I have with seat 30, half of the sample pool also have the same identical wrong.

• The 0.000048 probability (table 4 - table 11):

I found hundreds of cases for students who have 5, 6, 7, 8, 9, 10, and 11 identical wrongs with the probabilities ranging between **0.000001** and **0.000098**. The 0.000048 probability is neither unique nor the extreme. It falls in the mid-range of probabilities listed in this document for all 6 to be identical and wrong.

The statistics used to prove my cheating:

When the above statistics are viewed with a data set expanded from only two students to the entire HDS class, it is clear that my statistics are not abnormal, extreme, or unique in any way.

There are hundreds of examples of probabilities in-between the range of 0.0000001 and 0.000098. If my probability of 0.000048 was seen as improbable, and used as evidence to confirm I was cheating, then is it logical all other students who have a probability in-between the range of 0.0000001 and 0.000098 could be accused of cheating? Saying that there is a 99.99995% chance I was cheating also means that there is a 99.9999x% to 99.99999x chance that all those other students were cheating as well. The only difference between myself and the other students was that my fidgeting and eye-movements caused me to look suspicious.

For multiple-choice questions, each choice has two or three conditions

No possibility of cheating:

- 1. Knowing
- 2. Guessing

Possibility of cheating:

- 1. Knowing
- 2. Guessing
- 3. Copy Answers

Based on the isolated statistic created from only one comparison, the 0.000048 probability was interpreted as a 99.99995% chance that I was cheating. With this kind of scrutiny:

- For questions that I got wrong, if I made any changes and my answer happened to be the same as the student in seat 30, then I must have copied the answers by briefly glancing over.
- The committee never considered the possibility that I was not cheating since there is only a 0.000048% possibility that I was not cheating. Under such light, everything I said sounded dishonest and like an excuses.
- I am also a repeat M1, and thus I would probably resort to cheating in order to pass.

The facts:

- I started strong this semester, as my HDS guiz score was in the top 15%.
- My module 1 test performance was greatly impacted due to the alleged accusation two days before my exam. Under such difficult stress, my final score was 68%, and the class average was 69%.
- I did not ask for accommodations before because there was never any need. The
 distractions do not bother me or impact my performance. The sole reason I will
 request accommodation in the future is so that my fidgeting will not be
 misinterpreted.

Everything I stated in my previous CAPP presentation still stands true.

I have presented solid scientific evidence that the criteria of cheating for the particular test in question should be reviewed. I thank the Executive Review Committee for the opportunity to defend my position and I sincerely hope that due consideration will be given for the evidence presented.

Similarity:

Similarity greater or equal to 76% with 6 or more identical wrong answers

Table 1 - 76% or greater similarity with 6 or more identical wrongs

student	compare	Identical correct	Identical wrong	similarity
95	133	12	10	88%
75	145	14	8	88%
117	156	13	8	84%
137	145	15	7	88%
72	117	13	7	80%
75	137	13	7	80%
117	72	13	7	80%
137	75	13	7	80%
14	60	12	7	76%
51	137	12	7	76%
60	75	12	7	76%
75	117	12	7	76%
32	113	16	6	88%
20	117	15	6	84%
22	91	15	6	84%
32	145	15	6	84%
14	72	14	6	80%
21	140	14	6	80%
28	72	14	6	80%
32	137	14	6	80%
44	80	14	6	80%
59	89	14	6	80%
73	117	14	6	80%
89	59	14	6	80%
113	145	14	6	80%
117	73	14	6	80%
117	145	14	6	80%
129	156	14	6	80%
137	32	14	6	80%

140	21	14	6	80%
145	113	14	6	80%
145	117	14	6	80%
156	129	14	6	80%
14	112	13	6	76%
14	156	13	6	76%
16	113	13	6	76%
32	44	13	6	76%
44	32	13	6	76%
50	89	13	6	76%
51	145	13	6	76%
55	85	13	6	76%
60	145	13	6	76%
111	137	13	6	76%
112	14	13	6	76%
112	113	13	6	76%
136	139	13	6	76%
144	145	13	6	76%

Table 2 – cases with 80% or higher similarity

student	compare	similarity
29	146	92%
29	130	92%
29	32	88%
29	113	88%
32	113	88%
32	146	88%
33	69	88%
75	145	88%
95	133	88%
113	146	88%
115	146	88%
130	146	88%
137	145	88%
14	92	84%
14	113	84%

20	117	84%
22	91	84%
28	146	84%
28	115	84%
29	145	84%
29	115	84%
29	43	84%
32	145	84%
74	154	84%
117	156	84%
145	146	84%
7	86	80%
14	72	80%
14	29	80%
14	146	80%
21	140	80%
28	72	80%
28	29	80%
28	130	80%
29	74	80%
29	86	80%
31	113	80%
31	143	80%
32	137	80%
32	115	80%
32	130	80%
33	86	80%
40	74	80%
40	154	80%
43	113	80%
44	80	80%
59	89	80%
59	150	80%
72	117	80%
73	117	80%
73	113	80%
73	86	80%
74	127	80%
75	137	80%
86	33	80%
86	73	80%
86	92	80%
86	105	80%
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Statistical Analysis of identical wrongs with Student at seat 30:

These are not all the cases, but just a few listed. In the sample pool of 6 students compared with the student at seat 30.

	Q1 0.10	Q2 0.18	Q6 0.26	Q12 0.19	Q13 0.04	Q16 0.04	Q20 0.23	Q22 0.33	Q23 0.78
Seat 30	d	a	b	b	a	b	d	d	a
106		х	Х		X	X			Х
118			Х	Х		X		X	Х
87	Х	х		Х			Х	Х	Х
Seat 29 (Endres)	х	х	х		x			х	х
135		Х	Х			X			Х
157				Х		X		Х	Х

Table 3 - Identical wrong answers with student at seat 30

- For question 13 and question 16, there is 4% of the class who chose the same answer. In the small sample pool of six, 5 students have at least one identical wrong of those two questions.
- Student 106 is the only one who has the same identical wrongs for both questions with the lowest number. The probability of student 106 compare to the student (seat 30) is 0.000058.
- When the sample pool is extended to more than one, it clearly shows that for each identical wrong I have with the student at seat 30, at least half of the students from the sample have the same identical wrong.
- Is it rational to use the statistics of student 106 to say that he/she might be cheating by somehow copying the answers from student at seat 30? If not, then how can my probability with seat 30 be used to prove I was cheating? The only additional factor is my fidgeting.

HDS Quiz Probability samples for all 5 to be identical and wrong:

Probability range for all 5 identical and wrong: 0.000003 - 0.000068

Student	Compare to	Probability	Same wrong Answers
18	49	0.000077	5
18	108	0.000016	5
18	141	0.000068	5
(seat 30)	340*	0.000058	5
24	65	0.000009	5
24	67	0.000003	5
108	82	0.000038	5
106	22	0.000058	5
141	18	0.000068	5

Table 4 - Probability with 5 identical wrong answers

HDS Quiz Probability samples for all 6 to be identical and wrong:

Probability range: 0.000001 - 0.000098

Student	Compare to	Probability	Same Wrong Answers
11	83	0.000033	6
11	108	0.000016	6
11	152	0.000048	6
12	61	0.000088	6
13	24	0.000011	6
13	27	0.000007	6
13	47	0.000001	6
23	83	0.000031	6
34	27	0.000035	6
34	61	0.000092	6
42	67	0.000037	6
42	90	0.000069	6
46	153	0.000060	6
60	102	0.000070	6
61	12	0.000088	6
61	102	0.000016	6
61	132	0.000056	6
67	109	0.000079	6
67	153	0.000065	6

68	13	0.000050	6
68	132	0.000056	6
91(Endres)	22 (seat 30)	0.000048	6
96	161	0.000068	6
103	16	0.000071	6
108	18	0.000016	5
108	141	0.000026	6
132	110	0.000031	6
135	42	0.000067	6
149	141	0.000067	6
153	41	0.000055	6
153	114	0.000098	6
155	161	0.000077	6
161	153	0.000030	6
69	118	0.000089	6
31	61	0.000087	6
104	46	0.000090	6
70	42	0.000058	6
104	46	0.000090	6
111	23	0.000089	6
90	42	0.000069	6
94	61	0.000055	6
139	136	0.000051	6

Table 5 - Probability with 6 identical wrongs

HDS Quiz Probability samples for all 7 to be identical and wrong:

Probability range: 0.000004 - 0.000098

Student	Compare to	Probability	Same Wrong Answers	
5	19	0.000073	7	
5	46	0.000067	7	
5	83	0.000004	7	
5	120	0.000088	, 7	
5	126	0.000078	7	
8	37	0.000078	7	
11	138	0.000023	7	
13	52	0.000032	7	
16	121	0.000082	7	
24	16	0.000047	7	
27			7	
	68	0.000004	7	
27	132	0.000010		
34	83	0.000003	7	
37	157	0.000069	7	
41	42	0.000071	7	
41	67	0.000033	7	
41	83	0.000024	7	
41	136	0.000044	7	
42	49	0.000005	7	
42	83	0.000019	7	
47	34	0.000014	7	
47	67	0.000005	7	
48	161	0.000005	7	
49	30	0.000040	7	
49	61	0.000011	7	
49	62	0.000020	7	
49	110	0.000026	7	
49	138	0.000076	7	
50	87	0.000077	7	
60	121	0.000049	7	
79	147	0.000098	7	
82	110	0.000010	7	
88	110	0.000004	7	
106	118	0.000022	7	
109	119	0.000059	7	
110	34	0.000012	7	
110	138	0.000097	7	
114	123	0.000031	7	
121	103	0.000080	7	
157	119	0.000010	7	
158	147	0.000083	7	
85	42	0.000017	7	
101	46	0.000071	7	
116	34	0.000043	7	

Table 6 – Probability with 7 identical wrong answers

HDS Quiz Probability samples for all 8 to be identical and wrong:

Probability range: 0.0000002 - 0.000096

Student	Compare to	Probability	Wrong Answers
9	37	0.000071	8
12	120	0.000068	8
19	46	0.000074	8
25	49	0.000015	8
25	78	0.000023	8
25	82	0.000096	8
25	158	0.000061	8
27	47	0.0000002	8
34	126	0.000026	8
34	142	0.000015	8
36	119	0.000023	8
37	121	0.000039	8
41	64	0.000057	8
41	90	0.000023	8
42	25	0.000030	8
46	48	0.000022	8
46	126	0.000063	8
48	87	0.000048	8
48	110	0.000042	8
48	155	0.000016	8
50	119	0.000029	8
50	120	0.000061	8
57	118	0.000059	8
57	157	0.000059	8
61	83	0.000001	8
78	42	0.000006	8
87	138	0.000009	8
88	155	0.000040	8
110	114	0.000004	8
110	125	0.000011	8
110	126	0.000013	8
118	34	0.000030	8
118	93	0.000022	8
118	142	0.000084	8
118	144	0.000035	8
120	125	0.000069	8

Table 7 - Probability with 8 identical wrong answers

HDS Quiz Probability samples for all 9 to be identical and wrong:

Probability Range: 0.000001 - 0.000092

Student	Compare to	Probability	Wrong Answers
3	87	0.000005	9
12	25	0.000034	9
23	11	0.000001	9
25	37	0.000017	9
48	97	0.000092	9
49	82	0.000001	9
110	46	0.000002	9
120	25	0.000030	9

Table 8 - Probability with 9 identical wrong answers

HDS Quiz Probability samples for all 10 to be identical and wrong:

Probability Range: 0.000001 - 0.000019

Student	Compare to	Probability	Wrong Answers
9	25	0.000004	10
25	118	0.000019	10
133	95	0.000001	10

Table 9 - Probability with 10 identical wrong answers

HDS Quiz Probability samples for all 11 to be identical and wrong:

Probability Range: 0.000004

Student	Compare to	Probability	Wrong Answers
157	118	0.0000004	11

Table 10 - Probability with 11 identical wrong answers

Timestamps

The timestamps from the laptops and the video cannot be synced up. The video showed the student in seat 30 pass behind me at 29:15, but his timestamps show that he quit the exam at 34:42. There were less than 4% of the timestamps that show we were overlapping. However, the following 20-second timestamp sequence is exactly identical. It does not seem possible because it would require me to predict when he switches questions:

Student in seat 30

6	4	Choice	8:30:33 AM	Navigating	Choice(s): B
7	3	Choice	8:30:38 AM	Navigating	Choice(s): D
8	3	Choice	8:30:42 AM	Navigating	Choice(s): B
9	3	Choice	8:30:46 AM	Navigating	Choice(s): A
10	3	Choice	8:30:49 AM	Navigating	Choice(s): B
11	3	Choice	8:30:53 AM	Navigating	Choice(s): B

Student in seat 29 (Julian)

6	5	Choice	8:30:33 AM	Navigating	Choice(s): B
7	6	Choice	8:30:38 AM	Navigating	Choice(s): D
8	6	Choice	8:30:42 AM	Navigating	Choice(s): B
9	6	Choice	8:30:46 AM	Navigating	Choice(s): A
10	9	Choice	8:30:49 AM	Navigating	Choice(s): B
11	9	Choice	8:30:53 AM	Navigating	Choice(s): B

	Student in seat 29 (Endres)	Student in seat 30
Average revisits per question	10	4.5